

EXPANDED SITE INSPECTION REPORT
FOR

FAIRMONT RAILWAY MOTORS
FAIRMONT, MINNESOTA

U.S. EPA ID: MND096488986

EPA Region 5 Records Ctr.



385566

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Fairmont Railway Motors

Fairmont, Minnesota

EXPANDED SITE INSPECTION REPORT

1.0 Site History

The Fairmont Railway Motors facility (Site) began operations in 1909. In 1979, the company was purchased by the Harsco Corporation of Camp Hill, Pennsylvania. The company presently manufactures hydraulic hand tools, railway maintenance vehicles, rail grinders, guide wheels, and equipment that adapts standard road trucks for railway travel.

Prior to 1930, the facility's hazardous and solid waste disposal practices are unknown. In the early 1930s, the facility began disposing of wastes in a trench between the two railroad tracks, just east of Fourth Street and north of the manufacturing plant. Dumping continued, expanding to the east toward Main Street until about 1969, when the area between the tracks became full. The landfill was then expanded west of Fourth Street between the tracks. Dumping ceased there in about 1984. Wastes disposed of in the landfill included paint dust, foundry sand, metals, paint sludges, spent silica sand, steel shot, and cyanide wastes. (Reference 1)

A Preliminary Assessment of the Site was prepared by the Minnesota Pollution Control Agency (MPCA) and submitted to the U.S. Environmental Protection Agency (EPA) in March 1987. A Screening Site Inspection (SSI) work plan was prepared by Ecology and Environment, Inc., EPA's Field Investigation Team (FIT), and approved in October 1988. The SSI was conducted by the FIT in December 1988 and an SSI report was submitted and approved by the EPA in June 1989.

The results of the SSI conducted by the FIT determined that contamination was present and recommended the site for additional investigation. The results of the SSI were presented to representatives of Fairmont Railway Motors. After review of the SSI results, representatives of Fairmont Railway Motors agreed to conduct additional investigation under the guidance of the MPCA. A work plan for a Phase II Site Investigation was submitted by Dames and Moore, consultant

for Fairmont Railway Motors, to Site Assessment Unit staff at the MPCA (Reference 2). Field work for the investigation began in April 1991. Results of the investigation were received by the MPCA in November 1991. The work plan and field work conducted were designed to meet the specifications and requirements of an Expanded Site Inspection and to score the Site using the Hazard Ranking System.

2.0 Ground Water Migration Pathway

Nine soil borings were drilled and three monitoring wells were installed as part of the investigation. Samples were collected from the soil borings and monitoring wells and analyzed for EPA Target Compounds and Analytes. The borings, monitoring wells, and samples collected were used to assess the nature and extent of contamination in the landfill and used to evaluate the migration pathways.

Analysis of the soil and ground water samples collected from the borings and monitoring wells indicate the presence of EPA Target Compounds and Analytes in soil and EPA Target Analytes in shallow ground water, as a result of past operations at the facility. Volatile organic and semi-volatile organic compounds, pesticides, polychlorinated biphenyls, cyanide, and heavy metals were all detected in soil collected during the investigation. Heavy metals were detected in the ground water samples collected from the monitoring wells. Arsenic, cadmium, chromium, and lead were detected at concentrations exceeding the Maximum Contaminant Level, established by the EPA or the Recommended Allowable Limits for drinking water, established by the Minnesota Department of Health. (Reference 3)

The city of Fairmont's primary source of water for domestic and industrial use is obtained from Budd Lake. However, Fairmont does maintain a back-up well located near Budd Lake. The well is screened through Cretaceous deposits from a depth of 184 to 296 feet. It is capable of yielding 870 gallons per minute.

Private domestic wells outside Fairmont's municipal supply system obtain water mostly from the glacial drift aquifers, especially west of the city. According to a house count on U.S Geological Survey (USGS) topographic maps of the area of

the site, multiplied by an average number of 2.46 persons per household (derived from 1990 Census data), approximately 275 persons reside within a four-mile radius of the site outside the corporate limits of the city of Fairmont.

3.0 Surface Water Migration Pathway

No release of contaminants to surface water which can be attributed to the Site was documented during the SSI conducted by FIT or the Phase II Investigation conducted by Dames and Moore. Two sediment samples were collected from the east shore of the channel which connects Sisseton Lake and George Lake during the SSI. A third sediment sample was collected upgradient from the Site, in Sisseton Lake, as a potential background sample. Analytical results of the downgradient samples detected the presence of semi-volatile organic compounds. Many of the same semi-volatile organic compounds, primarily polynuclear aromatic hydrocarbons, were also detected in the background sample. The proximity of other industries, including a coal burning electric power plant, railroad tracks, and perhaps others, may have contributed to the contamination found in the sediments. Therefore, a release to surface water attributable to the Site alone, was not documented. However, the Site may be a contributing factor.

A potential for a release to surface water via the ground water to surface water pathway exists. Contaminants detected in the shallow ground water as a result of past operational procedures at the Site, may be transported by ground water in sand and gravel layers found in the till, toward the north where they may discharge into George Lake. Additional contaminants found in soil samples may also migrate to the ground water and be discharged to surface water.

Budd Lake is the primary source of industrial and domestic water for the city of Fairmont and provides water to approximately 12,000 residents of the city. The water intake is located just over one mile south of the Site and is upgradient from the Site. Budd Lake is one in a series of a chain of lakes connected by channels. Water flows through the lakes from south to north and enters Center Creek, which flows north for a short distance and then turns to the east.

The chain of lakes and Center Creek are all used for recreational fishing. A number of wetland areas are present within 15 miles downstream from the Site.

The wetland areas are generally small and are located along Center Creek. No threatened or endangered species are known to exist within 15 miles downstream from the Site or in the adjacent wetland areas.

4.0 Soil Exposure Pathway

Soil contaminated primarily with polynuclear aromatic hydrocarbons were detected throughout the landfill area in the upper 2 feet of soil collected. The area of surface soil contamination is estimated to be approximately 224,000 square feet. The area estimated to be contaminated is based on the location of the soil samples and the estimated surface area of the landfill.

Approximately 450 people are employed by Fairmont Railway Motors, most of which work within the building. There are no residents, schools, or day care centers located within 200 feet of the known area of contamination. There does not appear to be any recreational use of the contaminated area. The landfill area east of Fourth Street is fenced, deterring unauthorized entry.

5.0 Air Migration Pathway

The air migration pathway was not evaluated during this investigation. A low potential exists for a release of contaminants found on site to the air.

6.0 Conclusions and Recommendations

A release of EPA Target Analytes to ground water as a result of past operational procedures at the Site was documented. In addition, a potential for a release to surface water and for exposure via contaminated surficial soil exists.

The city of Fairmont's municipal water system obtains water from Budd¹ Lake, which is located upgradient in the chain of lakes from the Site and is therefore not a target. Fairmont's municipal well is a standby well which is seldom used. Based on the geology of the area, the distance and direction from the Site to the well, there appears to be little chance that the well will be impacted by contaminants detected at the Site.

Other potential targets include the chain of lakes as a fishery and exposure of on-site workers to contaminated soil.

Continued collection and analysis of water samples from the monitoring wells may be appropriate at this time. Additional investigation to determine the source(s) and extent of the sediments contaminated with semi-volatile organic compounds may also be appropriate.

Site Fairmont Railway Motors

EPA # MNDO96488986

Date _____

Time _____ a.m. p.m.

Direction West

Weather _____

Photographed by: Mark Hoffman

Sample ID # _____

Description Boring locations

B-5 (foreground) + B-6

(background), west landfill
area



Site Fairmont Railway Motors

EPA # MNDO96488986

Date _____

Time _____ a.m. p.m.

Direction North

Weather _____

Photographed by: Hoffman

Sample ID # _____

Description Boring location

B-6



Site Fairmont Railway Motors

EPA # MND096488986

Date _____

Time _____ a.m. p.m.

Direction North

Weather _____

Photographed by: Hoffman

Sample ID # _____

Description Location of

boring B-7



Site Fairmont Railway Motors

EPA # MND096488986

Date _____

Time _____ a.m. p.m.

Direction South

Weather _____

Photographed by: Hoffman

Sample ID # _____

Description _____

Monitoring well MW-1



Site Fairmont Railway Motors

EPA # MND096488986

Date _____

Time _____ a.m. p.m.

Direction North

Weather _____

Photographed by: Hoffman

Sample ID # _____

Description _____

Monitoring well MW-2



Site Fairmont Railway Motors

EPA # MND096488986

Date _____

Time _____ a.m. p.m.

Direction Northeast

Weather _____

Photographed by: Hoffman

Sample ID # _____

Description _____

Monitoring well MW-3

